REMARKS

The present application includes Claims 1-21. In response to a restriction requirement, the claims of Group I, namely, Claims 1-11, were elected for further prosecution and the election of Group I is hereby affirmed. As such, Claims 12-21 have been withdrawn.

The Official Action has rejected Claims 1-11 as either being anticipated or rendered obvious by various combinations of the cited references. In this regard, Claims 1, 3 and 4 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,277,194 to AnnaLena Thilderkvist, et al. As to Claim 3, the Official Action also cites U.S. Patent Application Publication No. US 2003/0170583 to Sadao Nakashima, et al. and a Google search dated February 20, 2006 of www.memsnet.org/material/polysiliconfilm as providing further supporting evidence. Likewise, in conjunction with Claim 5, the Official Action also cites U.S. Patent No. 6,660,093 to Maki Hamaguchi, et al. and U.S. Patent No. 6,027,956 to Pierre Irissou as providing additional supporting evidence. The Official Action also rejected Claims 2 and 6 under 35 U.S.C. § 103(a) as being unpatentable over the Thilderkvist '194 patent in view of U.S. Patent No. 6,450,346 to James E. Boyle, et al. The Official Action also rejected Claim 5 under 35 U.S.C. § 103(a) as being unpatentable over the Thilderkvist '194 patent in view of U.S. Patent No. 5,820,683 to Katsutoshi Ishii, et al. The Official Action also rejected Claims 7-9 and 11 under 35 U.S.C. § 103(a) as being unpatentable over the Thilderkvist '194 patent in view of the Boyle '346 patent when taken in light of the additional evidence provided by the Nakashima '583 publication and a Google search dated February 20, 2006. Finally, the Official Action rejected Claim 10 under 35 U.S.C. § 103(a) as being unpatentable over the Thilderkvist '194 patent in view of the Boyle '346 patent and in further view of the Ishii '683 patent in light of the further evidence provided by the Nakashima '583 publication and the Google search dated February 20, 2006.

As described in detail below, independent Claims 1 and 7 have been amended to further patentably distinguish the claimed invention from the cited references, taken either individually or in combination. In light of the foregoing amendments and the following remarks, Applicants respectfully request reconsideration of the present application and allowance of the current set of claims.

Independent Claims 1 and 7 are directed to a support fixture having a boat for holding at least one wafer, a first layer on at least a portion of the boat and a second layer on at least a portion of the first layer. As set forth by independent Claim 1, the boat is comprised of either silicon carbide or graphite, while the first layer is comprised of silicon carbide and the second layer is comprised of polysilicon. While independent Claim 7 does not specify the materials that form each component, independent Claim 7 recites that the first layer has a greater purity than the boat and that the second layer is formed of a different material than the first layer and the boat and has (i) a hardness that more closely matches the hardness of a wafer than the hardness of the boat and/or (ii) a coefficient of thermal expansion that more closely matches a coefficient thermal expansion of a wafer than the coefficient of thermal expansion of the boat. As now amended, both independent Claims 1 and 7 further recite that the support fixture includes "at least one wafer held by a portion of said boat coated with both said first and second layers, said at least one wafer in contact with said second layer."

As noted above, the claims are rejected based on various combinations of the cited references. The rejection of each claim is premised, however, upon the same primary reference, that is, the Thilderkvist '194 patent. The Thilderkvist '194 patent describes a method for cleaning surfaces in a substrate processing chamber. For example, the Thilderkvist '194 patent describes the cleaning of a susceptor within an epitaxial deposition chamber. As described by the Thilderkvist '194 patent, the susceptor is a heat-conducing body formed of graphite that is coated with silicon carbide (SiC) in one embodiment and formed as a solid SiC platform in another embodiment. Absent cleaning, the susceptor may include contamination, such as metal contaminants, that will be advantageously transferred to a wafer and, in particular, to the epitaxial layer deposited upon the wafer if the contaminants are not first removed. As such, the Thilderkvist '194 patent describes the deposition of layer 126 upon the susceptor in order to remove contaminants from the susceptor. Layer 126 may be formed of silicon, such as polycrystalline or amorphis silicon. As shown by Figures 8 and 9 of the Thilderkvist '194 patent, contaminants diffuse from the susceptor to layer 126, such as during the high-temperature process of applying layer 126. Layer 126 may then be removed in order to correspondingly remove the contaminants that have diffused to layer 126 as shown in Figure 9. This process of alternately applying and removing a silicon layer can be repeated in order to further clean the

susceptor. Notably, however, the silicon layer 126 is removed prior to inserting a wafer into the epitaxial chamber. In other words, layer 126 is removed prior to placing any wafer upon the susceptor. Indeed, the removal of layer 126 is necessary in accordance with the process described by the Thilderkvist '194 patent since the contaminants have diffused into layer 126 and must therefore be removed from the processing chamber prior to processing any wafers in order to achieve the objective of the Thilderkvist '194 patent of cleaning the susceptor.

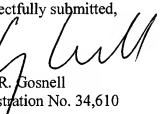
As now recited, amended independent Claims 1 and 7 recite at least one wafer that is supported by the boat and is in contact with the second layer. As described above, the Thilderkvist '194 patent does not teach or suggest that any wafer is supported by the susceptor while coated with a second layer, such as layer 126, and, indeed, layer 126 must be removed from the susceptor prior to the insertion of wafers into the processing chamber in order to remove the contaminants in accordance with the objective of the Thilderkvist '194 patent. Additionally, none of the other cited references teach or suggest a support fixture in which at least one wafer is supported by the boat in such a manner that the wafer is in contact with the second layer as now set forth by amended independent Claims 1 and 7. As such, no combination of the cited references teaches or suggests the support fixture of amended independent Claims 1 and 7 for the same reason. It is therefore submitted that the rejections of Claims 1-11 are overcome.

CONCLUSION

In view of the amendments to the claims and the foregoing remarks, it is respectfully submitted that all of the claims of the present application are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



Guy R. Gosnell
Registration No. 34,610

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Charlotte Office (704) 444-1000
Fax Charlotte Office (704) 444-1111

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT & TRADEMARK OFFICE ON July 28, 2006.